TWO NEW HYMENOPTERA OF THE SUPERFAMILY PROCTOTRYPIDAE FROM AUSTRALIA.

By Alan P. Dodd.

(*Communicated by W. W. Froggatt, F.L.S.*)

Among a small collection of Micro-Hymenoptera kindly lent me by Mr. W. W. Froggatt, Government Entomologist of New South Wales, the two species described herein were picked out as new; of these one is of special interest, being a primary parasite of the Sheep-Maggot Flies.

I am very much indebted to Mr. Froggatt for the loan of the specimens, and also for the data and information contained in his letters.

Family DIAPRIIDAE.

Hemilexomyia, n.gen.

♀.—In Kieffer's table of genera (Genera Insectorum, 1911), running to *Hemilexis* Foerster, *Paramesius* Westwood, and *Spilomicrus* Westwood; closely related to all these genera and combining many of their characteristics, but at once differing in the incised base of the body of the abdomen, and the very long stigmal vein; *Hemilexis* and *Spilomicrus* possess a more or less truncate abdomen at the apex, but in both these the base of the body of the abdomen is distinctly raised from the petiole, whereas *Paramesius*, which does not possess the latter character, has the apex of the abdomen narrow and pointed. The detailed generic characters are given in the description of the species.

Type, *Hemilexomyia abrupta*, n.sp.

Hemilexomyia abrupta, n.sp.

♀.—Length, 5.5 mm. Shining black; legs, including the coxae, bright red; antennae red, the apical half more or less dusky; tegulae red.

Head normal; smooth and shining, except for scattered small punctures each bearing a long fine seta; viewed from above, sub-rectangular, about twice as wide as long; viewed from the side, the frons triangular, the antennal prominence distinct; cheeks broad; eyes moderately large, giving off a few long setae; ocelli large, close together. Antennae inserted on a prominence in centre of frons, 13-jointed; scape long and slender; pedicle and flagellar joints with scattered long pubescence; pedicel twice as long as its greatest width; flagellum without a distinct club, the apical seven joints a little thickened; joint 1 cylindrical, one-half longer than pedicel (in two specimens from Marsden longer and twice as long as pedicel); joint 2 one-half as long as 1; joints 3 and 4 subequal,

a little shorter than 2, joints 5-10 subequal, subglobose, about as long as wide; apical joint conical, one-third longer than preceding. Thorax normal, twice as long as its greatest width; pronotal neck short and stout, the pronotum itself hardly visible from above; scutum and scutellum smooth and shining, with a few small setigerous punctures; scutum almost as long as its greatest width, broadly rounded anteriorly, the parapsidal furrows very deep, complete, and foveate; scutellum longer than its width at apex, subquadrate, at base with two large deep almost circular foveae, situated slightly obliquely to each other, each traversed by two or three more or less obscure carinae, their inner margins carinate, the narrow area between appearing as a shallow fovea (sometimes there are two of these shallow foveae); lateral margins of scutellum without a fovea, the posterior margin finely foveate; postscutellum conspicuous, carinate; median segment long, rugose, at base with an acutely raised carina (from lateral aspect appearing as a raised tooth) which branches to form laterally a distinct blunt tooth on either side, below these teeth are the blunt-toothed or subacute lateroposterior angles, and there is also a blunt tooth or protuberance on either side against the lateral margins anteriorly; median segment posteriorly with a short stout neck. Forewings very long and broad, extending a little beyond apex of abdomen; stained yellowish; venation thick and distinct, fuscous; submarginal vein well distant from the costa which it joins at half wing length; marginal vein somewhat thickened, almost as long as the stigmal vein which is perpendicular and very long for the family; pale yellow lines indicate basal, median, discoidal, recurrent, and radial veins. Hindwings two-thirds as long as the forewings, narrow slender, with a long costal vein. Petiole of abdomen stout, a little longer than wide, its lateral margins carinate, rugose, and with a paired median carina that projects into the incised abdomen; body of abdomen slender, about three times as long as its greatest width, conical, but the apex is blunt; viewed from the side gently convex above and beneath, and abruptly truncate at apex; smooth and shining, with a very few scattered setae; consisting of one segment only; anterior margin triangularly incised to form a short basal fovea. Legs slender; trochanters long and slender; femora slender for basal third, then much thickened; tibiae and tarsi slender, the latter 5-jointed with a pair of slender tarsal claws; intermediate tibiae a little longer than their femora, their tarsi a little longer than the tibiae; posterior tibiae plainly longer than their femora, and a little longer than their tarsi, the basal tarsal joint as long as 2-4 united; legs pilous, the tarsi spiny; posterior tibiae with two apical spurs.

Described from the following series: three females collected by L. Wilson at Marsden, South-west Riverina, N.S.W., 15.5.1919, and bred from pupae of one of the sheep-maggot flies; one female bred from pupae of *Ophyra nigra* Wied., Uardry, near Hay, N.S.W., 20.8.1916, J. L. Froggatt; three females bred from pupae of *Calliphora* (*Neopollinosa*) *villosa* R.D., Moree, N.S.W., J. L. Froggatt; one female caught by sweeping pine scrub, Grenfell, N.S.W., 1918, W. W. Froggatt. Thus the species is well established in the State.

In Farmer's Bulletin No. 113, June, 1917, of the New South Wales Department of Agriculture, "Sheep-Maggot Flies, No. 3," by W. W. Froggatt and J. L. Froggatt, on page 32 the discovery of this parasite is recorded and a general description given, and on the opposite page very good figures are given. The following extract is taken from this bulletin: "This is a very different hymenopteron from the previous ones found attacking the maggots and pupae of the

blow-flies,* and, as only about half a dozen specimens have been secured, it is not of much economic importance; yet, as it is evidently a primary parasite, it is well worth noticing."

The *Diapriidae* appear to confine their activities to Dipterous hosts, but so far this record of their breeding is the first in Australia.

The species is somewhat variable in the relative length of the pedicel and first flagellar joint, and in the foveae at the base of the scutellum. One female has a conspicuous thick protuberance at the apex of the abdomen; this process is very possibly retractile, which would account for its absence in the other specimens.

The types and cotypes are in the collections of Mr. W. W. Froggatt; one cotype is in the author's collection.

Family BELYTIDAE.

This family does not seem to be well represented in Australia, sixteen species having been recorded. The species described below differs considerably from all the Australian forms, falling in the group in which the scutellum is more or less spined or toothed, and containing four South American species described by Kieffer (Ann. Soc. Sci. Brussels, xxxiii., 1909) in four different genera, *Prosoxylabis* Kieffer, *Monoxylabis* Kieffer, *Acidopsilus* Kieffer, and *Odontopsilus* Kieffer, of which the first alone is founded on a female; the insect described herewith shows some diversity in the venation from all these, but the author does not deem it advisable to propose a new genus for its reception.

Prosoxylabis pictipennis, n.sp.

♀.—Length, 3.5mm.

Head, thorax (except the sentum), abdominal petiole, and the legs very deep red; sentum and body of abdomen bright chestnut; the first eight antennal joints bright reddish yellow, the apical seven black.

Head normal, subglobose, the antennal prominence very distinct; from lateral aspect the frons triangular, covered with a dense fine golden pubescence; eyes moderately small, ocelli small, close together. Antennae 15-jointed; scape slender, as long as the four following joints combined; pedicel short, a little longer than wide; funicle joint 1 distinctly longer, twice as long as its greatest width; 2-6 gradually shortening, 6 as wide as long; club 7-jointed (the first club joint really forms a transition between the funicle and club), its joints 1-6 somewhat wider than long, the apical joint twice as long as the penultimate. Thorax about twice as long as its greatest width; pronotum not visible from above; sentum plainly wider than long, covered with long fine golden pubescence, the parapsidal furrows delicate; scutellum on either side of basal fovea with dense golden pubescence, its disc with scattered pubescence; basal fovea large, subcircular, divided by a median carina that continues along the disc to terminate in a blunt tubercle or tooth posteriorly; postscutellum and median segment with a dressed sparse pubescence, the latter long. Forewings long and broad, extending well beyond apex of abdomen, marginal cilia short; discal cilia very dense and rather coarse very deeply embrowned, with a broad subhyaline band across the wing a little before the apex, a small subhyaline area just before the marginal vein, and a

*The two other known enemies of sheep-maggot flies are the Chalcids *Nasonia brevicornis* Girault and Saunders, and *Chalcis calliphorae* Froggatt.

similar area a little beyond the marginal vein, both against the costa; the broad band has its proximal margin straight, its distal margin deeply incised at the middle; venation obscure, consisting of a submarginal vein which joins the costa at nearly half wing length, a short linear marginal vein continued in a very oblique stigmal vein; no other veins visible. Petiole of abdomen long, several times as long as wide, and half as long as body of abdomen, carinate laterally and with three dorsal carinae; body of abdomen broadly ovate, not much longer than its greatest width, wholly smooth and shining, the second segment (first body segment) occupying four-fifths of the surface, the remaining segments very short and transverse. Legs normal, the femora clavate, the tibiae and tarsi slender.

Described from one female labelled "In moss, Mt. Wellington, Tasmania, 20.2.1902."

The paucity in the venation is possibly due to the cloudiness of the wings.

The type is in the collection of Mr. W. W. Froggatt.